From Drag Car to Dirt Car – A Tech Prep Integration Racecar Project Called "Kids First" Considered a Success

The connotation of Tech Prep has taken on a whole new meaning at the Boone Co. Area Technology Center (ATC) with the "Kids First" integration racecar project and it's easy to see why everyone is so excited. The original intent of the racecar project began with a simple plan to involve all the program areas of the ATC; however, during a Tech Prep meeting at Northern Kentucky University, it began taking the shape of an integrated project.

Dutch Kennedy, Boone Co. ATC welding instructor, offered the racecar as the type of project where vocational-technical and academic teachers could partner to provide a total learning experience for high school students. And so, "Kids First" was born. Agreed upon project goals between the ATC and Conner High School included bringing the school faculties together; showing that academic areas are interrelated to technical areas; creating high level learning activities to help improve

The finished product.


Instructor Dutch Kennedy

Construction

test scores; generating more student interest in technical areas; underscoring the mission of Tech Prep; motivating students to learn through an integrated curricula of academic and technical skills; and providing students with a life relevant learning situation.

"This was all about teamwork, planning ahead and working on a common goal. This project was for the students," says Kennedy. "This venture hits home for me because I am interested in racing and have my own car. It's amazing what kids can learn in high school in today's world in comparison to what was offered when I went to school. I wish this type of integrated student project had been in my time because I would have been all over it given the chance."

The project included participation from all program areas at the ATC, which meant planning how core content was integrated into the overall project. A monthly timeline was created to show how the academic and technical courses would integrate into the project. Additionally, Kennedy solicited the help of Jerry King, the owner of

The Final Touch

Florence Speedway and other area businesses including Moreland's One Stop, Ryan Muffler, Accu-Tex Signs, Steels Hometown Tire, Randy's Autobody and Union Auto Parts.

"I've been around for a long time and I know kids like cars. So, we decided to donate an old drag car when we heard about this project," said Mr. King. "We felt like the teachers and kids could take this car and build a real dirt car racecar and guess what – I'm impressed! They have done a good job and I've even looked at the car from a safety standpoint – they have taken care to include safety features throughout the car."

The drag car was donated; however, it had to be completely reconstructed in order to qualify as a dirt car. Welding and metal fabrication students were involved early on in the project.

"I personally think live work projects are the best teaching

The Final Touch

tools we have to offer and my students had an opportunity to apply what they had learned so they ran with it," says Metal Fabrication Instructor Kevin McKenney. "My students worked on a variety of special projects like the interior covers which include the door skin, package tray, floor board plates, dash board and we even fabricated the enclosure where the back seat used to be. This involved a heavy dose of mathematics for measuring and cutting. We also mounted the brackets for the radiator and fan shroud. Overall, my students performed extremely well during the entire project and I'm pleased with their mastery of skills in carrying out their duties."

"My students were an integral part of the entire project and worked on many facets of the car, but I think I am most proud of our efforts in reinforcing the outside of the driver side roll cage with a piece of 7 gauge sheet metal," said Kennedy. "We did this because if an impact to the door occurred, it would support a whole lot more than just the cage itself. This piece ties all the bars in together. My students welded every piece of bar work around the motor to protect it as well. These pieces were custom cut and fit as we went along. I'm extremely proud of their efforts. They performed like professionals."

Any car, let alone a racecar, has to have an engine to perform. While many

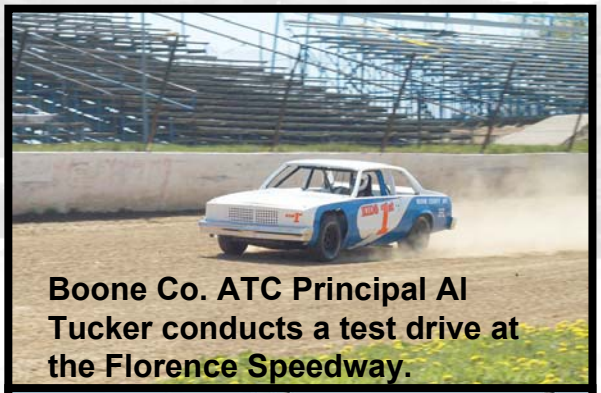
The Test Drive

students worked concurrently on the project, it was under the direction of Diesel Technology Instructor Joe Pietrosky that the engine was installed. (Employment of diesel service technicians and mechanics is expected to increase 10-20% for all occupations through the year 2012 – Bureau of Labor Statistics – Occupational Outlook Handbook, 2004-05 Edition. According to the National Automobile Dealers Association, the national average salary for an auto technician in 2002 was $41,588.)

"This project hit about every avenue that I teach so it was very worthwhile from my perspective," says Pietrosky. "My students were enthusiastic throughout the project and worked together as a team by installing the engine, transmission and rear end. Live work is the best teaching tool and because my students were part of a larger whole, they learned more. This project also helped get us more involved with the high school faculty and students."

The correct installation for the wiring of the car was another major area required for the completion of the project and Michael Hockenberry's electrical technology students were involved in this element of the task.

The Finish



Boone Co. ATC Principal Al Tucker conducts a test drive at the Florence Speedway.

"My students custom built and installed the wiring harness for the steering wheel and dash electrical/electronic controls," said Hockenberry. "We also wired the trailer that will be used to tow the race car by installing trailer lights and a harness for brake lights and turn signals."

"Overall, this project pulled the whole school together and this was a good thing," said John Thomas, auto body repair instructor at the ATC. (According to a national survey conducted by the Inter-industry Conference on Auto Collision Repair (ICAR), the industry will need 50,000 entry-level technicians a year. The job openings for collision repair technicians have exceeded the number of graduates for the past several years. According to the 2001 Allstate Foundation Survey, the average income for collision repair technicians over 20 years old was $41,268 in 2001.)

Most all the students who worked on the project provided services that directly related to the actual building of the car; however, one group of kids studied safety features including the use of seat belts.

"Working with this integration project gave me a greater appreciation for the racing world. There is

much more to it than a fast car with a big engine," said Health Science Instructor Nancy Meither. "We were amazed at all the requirements regarding safety that need to go into a car before it is allowed on the track."

Health Science Student Kara Taylor, a junior at Grant Co. High School said it best, **"**We all got to be proud of something. It was good for the school. It was educational and it was fun!"

"In addition to covering all the Tech Prep project goals, we were interested in getting kids involved in something that might carry over after school – this project provided the avenue for kids to get involved in something that will stop them from hanging out on the streets during the weekends," said Kennedy. " From my perspective, this is worth its weight in gold.

The 'Kids First' Team

"The racecar project was a great success. We feel like all of the project goals were achieved," said Boone Co. Tech Prep Coordinator Sue Sorrell. "I think the integration project will be even more successful in the 2004-05 school year because the students will have an opportunity to continue to work on the car and make it better."

"This racecar project has been a wonderful experience for both the staff here at the ATC and for those at Conner High School as well. By integrating with Conner High, I think it allowed an excellent opportunity for technical and academic teachers to share ideas working toward a common goal, the building of a racecar," said Boone Co. ATC Principal Al Tucker. "The project gave our students a real world work experience and I think it gave them a sense of pride and ownership in the car itself. Both students and faculty worked very hard building the car. I'm very proud of them."

Instructor Dutch Kennedy is interviewed at the Florence Speedway for promotion on a district wide basis.

KENTUCKY TECH *nically Speaking*

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